57. (new) The electrochemical cell of claim 53, wherein said electrode stack further comprises a first and a second hydrophobic layer, each of said hydrophobic layers disposed on an outer face of a corresponding positive electrode, said electrode stack folded to form said zigzag configuration.

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## Remarks

15 The Office Action is discussed in detail below.

Paragraph Numbers provided below correspond to the paragraph numbers of the Office Action. Claims 1-23, 25, 26, 29, 30, 34-37, 39, 40, 43, and 44 have been cancelled.

Claim 24, 27, 28, 31, 32, 33, 38, 41, 42, 45, and 46 have been amended. Claims 47-57 have been added. Support for amendments to the claims as well as for the added claims is found in the application as filed. No new matter has been added.

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### Drawings

Paragraphs 2, 3 and 4 of Office Action

The drawings are objected to as failing to comply with 5 37 CFR 1.84(p)(5) and 37 CFR 1.84(4).

Applicant submits corrected drawings for Figure 1B (sheet 2/13), Figure 3A (sheet 4/13) and Figure 9B (sheet 13/13). Applicant also submits marked-up copy of each sheet showing changes in red. Applicant requests that the objections be removed.

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### Specification

Paragraph 5 of Office Action

- 5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject.
- Claim 4 has been cancelled. Applicant requests that the objection be removed.

#### Paragraph 6 of Office Action

25 6. The abstract of the disclosure is objected to.

The abstract has been amended and a new abstract in included on a separate sheet.

## 30 Claim Rejections - 35 USC 112

Paragraph 8 of Office Action

Claims 4, 5, 8 and 9 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4, 5, 8 and 9 have been cancelled. Applicant requests that the rejection be removed.

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## Claim Rejections 35 USC 102

Paragraphs 10-14 of Office Action

- 10. Claims 1, 6, 7, 13-15, 21, 38-40, 45, and 46 are
  10 rejected under 35 USC 102(e) as being anticipated by Xie et al (US 6,287,721).
  - 11. Claims 1-11, 13-19, 22, 23, and 34-37 are rejected under 35 USC 102(b) as being clearly anticipated by Kawakami (US 5,582,931)
    - 12. Claims 1 and 13-15 are rejected under 35 USC 102(b) as being clearly anticipated by Post et al (US 5,147,737).

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- 13. Claims 1, 7 and 13-15 are rejected under 35 USC 102(b) as being clearly anticipated by Gozdz (US 5,460,904).
- 25 14. Claims 1, 7, 12, 13-15, 20, 24-26, 31, and 32 are rejected u;nder 35 USC 102(b) as being clearly anticipated by Shackle (US 5,300,373).

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## Allowable Subject Matter

Paragraph 15 of Office Action.

15. Claims 27-30, 33, and 41-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent formed.

Claims 1-23, 25, 26, 29, 30, 34-37, 39, 40, 43, 44 have been cancelled. Claim 24, 27, 28, 31, 32, 33, 38, 41, 42, 45, and 46 have been amended.

10 Specifically, claim 24 has been amended to include the limitation:

"...wherein said positive electrode comprises a nickel hydroxide material and/or said at least one negative electrode comprises a hydrogen storage alloy".

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As noted in Paragraph 15 of the Office Action (Allowable Subject Matter), Shackle fails to teach or suggest an electrode or counter-electrode formed of either nickel-hydroxide or hydrogen storage alloy.

20 Hence, claim 24 (as amended) is not anticipated by Shakel. Claims 27, 28, 31, 32 and 33 depend from claim 24 and include all of the limitations of claim 24.

Claim 38 has been amended to include the limitation:

"...wherein said positive electrode comprises a nickel hydroxide material and/or said negative electrodes comprise a hydrogen storage alloy."

As noted in Paragraph 15 of the Office Action

(Allowable Subject Matter), Xie fails to teach or suggest an electrode or a counter electrode formed of either nickel-hydroxide or hydrogen storage alloy. Hence, claim 38 as

amended is not anticipated by Xie. Claims 41, 42, 45, and 46 depend from claim 38 and include all the limitations of claim 38.

5 In view of the cancellation of claims 1-23, 25, 26, 29, 30, 34-37, 39, 40, 43, 44, the amendment of claims 24, 27, 28, 31, 32, 33, 38, 41, 42, 45, 46, and the above remarks, the rejections of claims 1, 6, 7, 13-15, 21, 38-40, 45, 46 under 35 USC 102(e) as being anticipated by Xie, the 10 rejection of claims 1-11, 13-19, 22, 23, 34-37 under 35 USC 102(b) as being anticipated by Kawakami, the rejection of claims 1, 13-15 under 35 USC 102(b) as being anticipated by Post, the rejection of claims 1,7, 13-15 under 35 USC 102(b) as being anticipated by Gozdz, and the rejection of 15 claims 1, 7, 12, 13-15, 20, 24-26, 31, 32 under 35 USC 102(b) as being anticipated by Shackle are all overcome and applicant respectfully requests they be removed.

#### New claims 47-57

As noted, Shackle fails to teach or suggest an electrode or counter-electrode formed of either nickel-hydroxide or hydrogen storage alloy. Hence, Shackle fails to teach or suggests the limitations of claims 47-52.

Also, as noted Xie fails to teach or suggest an electrode or counter-electrode formed of either nickel-hydroxide or hydrogen storage alloy. Hence, Xie fails to teach or suggest the limitations of claims 53-57.

### SUMMARY

Claims 1-23, 25, 26, 29, 30, 34-37, 39, 40, 43, 44 have been cancelled. Claim 24, 27, 28, 31, 32, 33, 38, 41, 42, 45, and 46 have been amended. Claims 47-57 have been added. In view of the above cancellations, amendments and remarks, claims 24, 27, 28, 31, 32, 33, 38, 41, 42, 45, 46, 47 - 57 are in condition for allowance. Applicant respectfully requests reconsideration, removal of remaining objections and rejections, and notification of allowance. Should the Examiner have any questions or suggestions regarding the prosecution of this application, he is asked to contact applicant's representative at the telephone number listed below.

15

Respectfully submitted,

20

Philip H. Schlazer

Reg. No. 42,127

- 25 Date: January 30, 2003
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## MARKED-UP COPY OF THE AMENDMENT TO THE ABSTRACT

Replace the ABSTRACT on page 33 with the following new ABSTRACT:

5 ABSTRACT

10

20

An electrochemical cell having [an electrode] electrodes that are arranged in a zigzag configuration with folds and creases. Additional electrodes may be inserted within the folds of the zigzag configuration. Preferably, the electrochemical cell is a prismatic cell.

# MARKED-UP COPY OF THE AMENDMENT TO THE CLAIMS

- 24. (amended) An electrochemical cell, comprising:
- a <u>positive</u> electrode folded in a zigzag configuration 15 having folds and creases; and
  - at least one bifold [counter-electrode] <u>negative</u> <u>electrode</u> having a first leg and a second leg, said first leg and said second leg disposed within a first and a second fold on the same side of the zigzag configuration of said electrode,
  - wherein said positive electrode comprises a nickel hydroxide material and/or said at least one negative electrode comprises a hydrogen storage alloy.
- 25 27. (amended) The electrochemical cell of claim [25] 24, wherein said positive electrode comprises a nickel hydroxide material.
- 28. (amended) The electrochemical cell of claim [25] 24, 30 wherein said at least one negative electrode comprises a hydrogen storage alloy.

31. (amended) The electrochemical cell of claim 24, wherein said first leg and said second leg are disposed in adjacent folds on the same side of the zigzag configuration of said positive electrode.

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- 32. (amended) The electrochemical cell of claim 24, wherein said at least one bifold [counter-electrode] negative electrode is a plurality of bifold [counter-electrodes] negative electrodes, each of said bifold [counter-electrodes] negative electrodes having a first leg and a second leg.
- 33. (amended) The electrochemical cell of claim 32, wherein said plurality of bifold <u>negative</u> electrodes are disposed over alternating creases on each side of the zigzag configuration of said <u>positive</u> electrode.
- 38. (amended) An electrochemical cell, comprising:

  an electrode stack including [an] a positive electrode

  20 disposed between a first and a second [counter-electrode]

  negative electrode, said electrode stack folded in a zigzag

  configuration with folds and creases; and

  an electrolyte,

wherein said positive electrode comprises a nickel

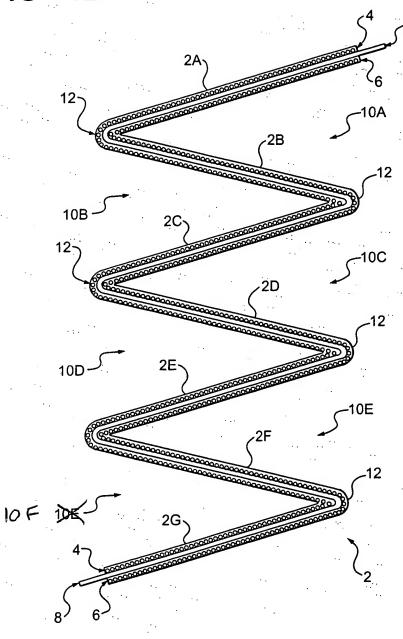
hydroxide material and/or said negative electrodes comprise
a hydrogen storage alloy.

41. (amended) The electrochemical cell of claim [39] 38, wherein said positive electrode comprises a nickel hydroxide material.

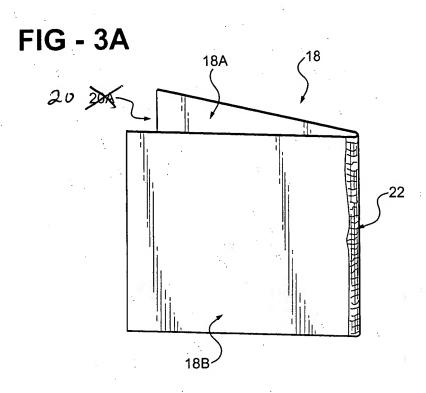
- 42. (amended) The electrochemical cell of claim [39]  $\underline{38}$ , wherein said negative electrodes comprise a hydrogen storage alloy.
- 5 45. (amended) The electrochemical cell of claim 38, further comprising a hydrophobic material disposed in at least one of the folds of the zigzag configuration of said electrode stack.
- 10 46. (amended) The electrochemical cell of claim 38, wherein said electrode stack further comprises a first and a second hydrophobic layer, each of said hydrophobic layers disposed on an outer face of a corresponding [counter-electrode] negative electrode, said electrode stack folded to form said zigzag configuration.



FIG - 1B







**FIG - 9A** 

